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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/6 4/2
19702A GSRS, MISSILE NUMBER 086, ROUND NUMBER B-9.(U)
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METEOROLOGICAL DATA REPORT

19702A GSRS
Missile No. 086
Round No. B-9

by

WSMR Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19702A GSRS, Missile Number 086, Round No. B-9, are presented in tabular form.		

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INTRODUCTION

19702A GSRS, Missile Number 086, Round Number B-9, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1100 MST, 19 April 1979. The scheduled launch time was 1100 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction, wind velocity and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

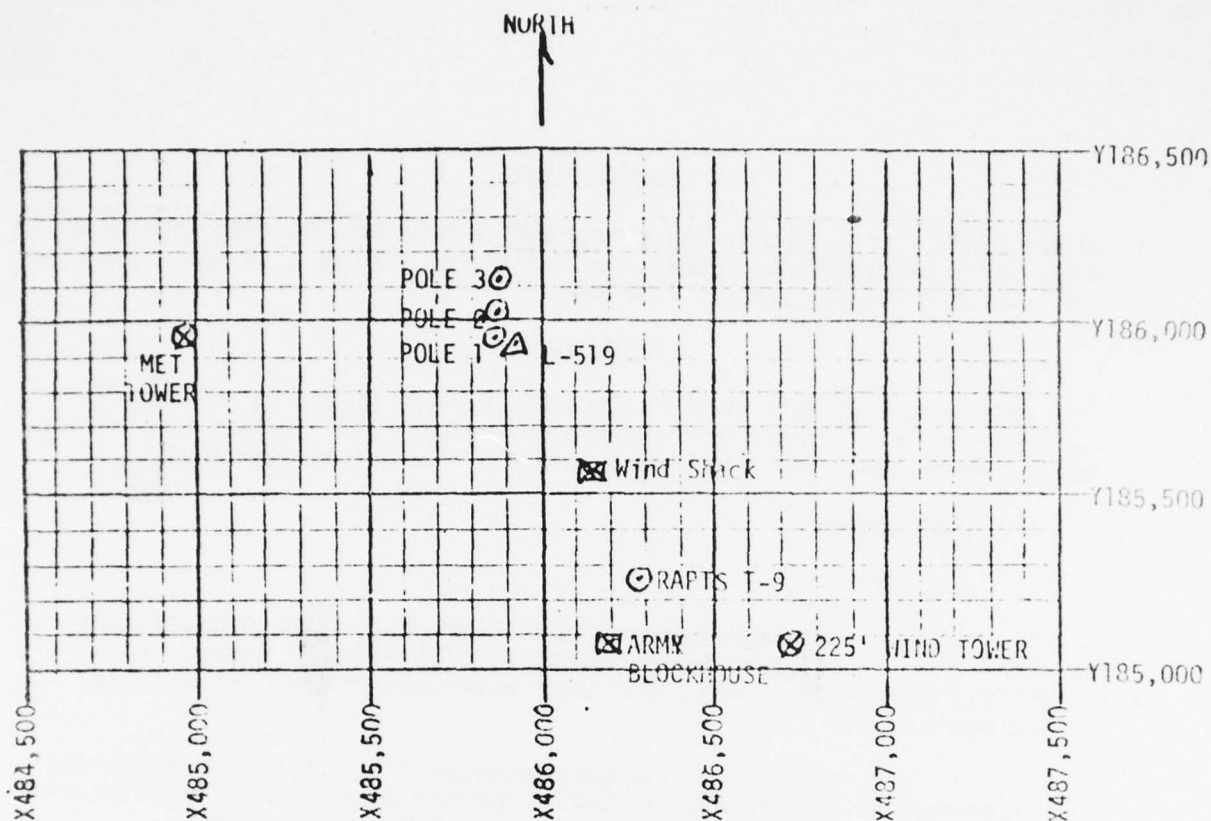
(1) Low level wind data were obtained from RAPTS T-9 pibal observation at T-0 minutes as follows:

SITE AND ALTITUDE

LC-33 1 kilometer (50-meter increments) 1050 MST

LC-33 1 kilometer (50-meter increments) 1100 MST

(2) Air structure data (rawinsonde) were collected at the SMR Met Site at T-0 minutes. Data were collected from surface to 125% of apogee in 500-foot increments.



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders in Wind Shack.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders in Wind Shack
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

The data are presented in the following tabulations:

ELEVATION	3977.30	FEET/MSL
PRESSURE	878.5	MDS
TEMPERATURE	23.2	°C
RELATIVE HUMIDITY	26	%
DEW POINT	2.5	°C
DENSITY	1028	GM/CM ³
WIND SPEED	5	MPH
WIND DIRECTION	270	DEGREES
CLOUD COVER	4	Cu
CLOUD COVER	1	Cs

TABLE I. SURFACE OBSERVATIONS TAKEN AT 1100 LOCAL TIME,
19 APRIL 1979, AT LC-33, (FC) 19702A GSRS,
MISSILE NO. 086, ROUND NO. B-9.

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	285	01	-30	312	02	-30	273	11
-20	281	02	-20	297	08	-20	277	13
-10	280	05	-10	306	07	-10	264	16
0.0	270	02	0.0	279	08	0.0	267	17
+10	277	03	+10	291	10	+10	265	15

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE II

TYPE 19702A GSRS (FC) MISSILE NO. 086 POUND NO. B-9

LAUNCHED FROM LC-33 DATE 19 April 1979 TIME 1100 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIPING AZIMUTH _____

OR TRUE NORTH TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 ft			LEVEL #2 62 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	280	22	-30	264	24
-20	267	18	-20	261	23
-10	276	16	-10	265	21
0.0	278	16	0.0	263	21
+10	266	14	+10	260	19
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	278	23	-30	268	17
-20	274	19	-20	267	19
-10	278	19	-10	266	18
0.0	278	19	0.0	265	17
+10	276	18	+10	266	18

WTSM COORDINATES: X484,082.64 Y185,957.73 H3983.00 (base)

TABLE III

TYPE 19702A GSRS (FC) MISSILE NO. 086 ROUND NO. 8-9

LAUNCHED FROM LC-33 DATE 19 April 1979 TIME 1100 MST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIR DEG	SPEED MPH
SUR	270	4.5
50	267	5.5
100	265	6.5
150	276	16.0
200	270	16.5
250	229	16.0
300	246	16.0
350	252	16.0
400	254	17.5
450	261	15.5
500	260	19.0

HEIGHT METERS	DIR DEG	SPEED MPH
550	265	19.0
600	264	18.5
650	268	17.0
700	267	16.5
750	263	14.0
800	275	12.5
850	271	12.0
900	270	13.5
950	265	13.0
1000	272	13.5
1050		

TABLE IV

RELEASED FROM LC-33 DATE 19 April 1979 TIME 1050 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30

MISSILE TYPE 19702A GSRS (FC) MISSILE NO. 086 ROUND NO. B-9

MISSILE LAUNCHED FROM LC-33 DATE 19 April 1979 TIME 1100 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIR DEG	SPEED MPH
SUR	270	4.5
50	267	3.5
100	264	3.0
150	274	19.5
200	268	20.5
250	266	17.0
300	273	17.0
350	267	17.5
400	263	20.5
450	265	17.5
500	260	21.5

HEIGHT METERS	DIR DEG	SPEED MPH
550	266	23.0
600	252	21.5
650	258	22.5
700	259	20.5
750	266	17.5
800	270	17.0
850	274	17.5
900	283	19.0
950	276	16.5
1000	264	18.0
1050		

TABLE V

RELEASED FROM LC-33 DATE 19 April 1979 TIME 1100 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30

MISSILE TYPE 19702A GSRS (FC) MISSILE NO. 086 ROUND NO. B-9

MISSILE LAUNCHED FROM LC-33 DATE 19 April 1979 TIME 1100 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH

OR TRUE NORTH TRUE NORTH

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

SIGNIFICANT LEVEL DATA
1090060069
S M R

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79 1100 HRS MST
ASCENSION NO. 69

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
878.0	3997.3	23.7	3.6	27.0
861.6	4534.1	20.2	-1.0	24.0
850.0	4916.7	18.9	-5	27.0
750.0	6375.9	7.8	-1.4	52.0
700.0	10228.5	1.9	-4.0	65.0
682.8	10884.5	.1	-5.1	63.0
673.4	11249.3	-.4	-15.0	32.0
654.8	11855.6	-.2	-21.6	18.0
649.0	12220.0	1.1	-21.9	16.0
636.0	12753.9	.5	-23.9	14.0
582.4	15052.8	-4.6	-28.0	14.0
531.6	17387.9	-10.5	-32.1	15.0
500.0	18932.0	-12.7	-33.9	15.0
491.2	19377.6	-12.7	-32.6	17.0
475.8	20174.3	-14.5	-33.0	19.0
452.6	21411.8	-18.0	-32.4	27.0
422.8	23073.5	-22.0	-42.2	14.0
400.0	24406.0	-25.5	-39.7	25.0
380.4	25599.4	-28.4	-36.4	46.0
347.0	27740.3	-34.4	-41.5	43.0
334.0	28615.5	-36.5	-41.7	58.0
321.6	29475.0	-38.6	-46.6	42.0
309.2	30382.0	-39.6	-50.1	32.0
300.0	31039.3	-41.5		
262.6	33967.2	-49.8		
250.0	35028.0	-50.2		
225.6	37214.3	-54.8		
200.0	39731.9	-58.3		
187.4	41075.3	-60.2		
155.6	44938.8	-55.7		
150.0	45705.8	-57.2		
133.2	47415.4	-57.0		
123.6	49729.3	-60.2		
120.0	50338.8	-59.2		
113.2	51543.8	-59.5		
106.4	52816.2	-61.7		
100.0	54053.3	-61.9		
93.6	55427.3	-63.9		
84.6	57475.6	-63.0		
74.7	59979.6	-67.3		

STATION ALTITUDE 3997.30 FEET MSL
 19 APR. 79 1100 HRS MST
 ASCENSION NO. 69

SIGNIFICANT LEVEL DATA
 1090060009
 S M R

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
70.0	61283.9	-63.9	
64.6	62905.2	-64.8	
53.5	63253.7	-61.9	
58.0	65102.1	-62.6	
55.3	65085.7	-57.2	
50.0	68191.0	-57.2	
32.8	77085.2	-53.3	
30.0	78995.9	-50.9	
27.6	80808.7	-46.6	

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79 1100 HRS MST
ASCENSION NO. 69

UPPER AIR DATA
1090060059
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) DEGREES	INDEX OF REFRACTION
3997.3	878.0	23.7	3.6	27.0	1026.9	672.4	240.0	1.000263
4000.0	877.9	23.7	3.6	27.0	1026.8	672.3	240.1	1.000263
4500.0	862.6	20.4	-7	24.2	1021.0	663.4	249.5	1.000253
5000.0	847.4	18.0	-4	27.6	1009.1	660.3	256.7	1.000251
5500.0	832.2	17.0	-1	31.2	996.4	664.5	262.4	1.000249
6000.0	817.3	15.4	-0	34.9	983.9	662.7	266.5	1.000247
6500.0	802.7	13.8	-1	38.4	971.6	660.9	266.8	1.000244
7000.0	788.3	12.2	-3	42.1	959.9	659.1	266.3	1.000242
7500.0	774.2	10.6	-6	45.7	947.7	657.2	266.9	1.000239
8000.0	760.3	9.0	-1.0	49.3	936.0	655.3	266.7	1.000236
8500.0	746.5	7.4	-1.6	52.9	924.4	653.4	266.1	1.000232
9000.0	732.8	5.8	-2.2	56.4	912.6	651.6	266.0	1.000229
9500.0	719.2	4.2	-2.9	59.9	901.0	649.7	265.9	1.000225
10000.0	705.9	2.6	-3.6	63.4	889.5	647.8	266.3	1.000222
10500.0	692.6	1.2	-4.4	66.2	877.7	646.0	266.8	1.000218
11000.0	679.8	-1.1	-7.6	66.6	865.5	644.4	265.8	1.000210
11500.0	667.0	-3.3	-16.9	66.2	850.9	643.8	259.6	1.000198
12000.0	654.4	-5.1	-21.6	66.2	834.5	643.9	250.7	1.000191
12500.0	642.1	-6.8	-22.9	66.2	816.2	645.0	243.5	1.000187
13000.0	630.0	-8.0	-24.3	66.2	803.2	644.0	233.0	1.000183
13500.0	618.1	-9.2	-25.2	66.2	791.3	642.7	217.1	1.000180
14000.0	606.4	-10.4	-26.1	66.2	779.4	641.3	203.8	1.000177
14500.0	594.9	-11.6	-27.0	66.2	767.8	640.0	200.7	1.000175
15000.0	583.6	-12.8	-27.9	66.2	756.4	638.7	200.8	1.000172
15500.0	572.3	-14.0	-28.7	66.2	745.3	637.2	208.1	1.000169
16000.0	561.2	-15.2	-29.6	66.2	734.3	635.7	210.6	1.000166
16500.0	550.4	-16.4	-30.5	66.2	723.6	634.2	219.6	1.000164
17000.0	539.7	-17.6	-31.4	66.2	713.0	632.6	227.8	1.000161
17500.0	529.2	-18.8	-32.2	66.2	702.2	631.3	230.4	1.000159
18000.0	518.8	-20.0	-32.8	66.2	690.3	630.4	232.4	1.000156
18500.0	508.6	-21.2	-33.3	66.2	678.6	629.5	233.8	1.000153
19000.0	498.6	-22.4	-33.6	66.2	666.8	628.8	236.7	1.000150
19500.0	488.8	-23.6	-32.6	66.2	654.3	628.5	239.7	1.000148
20000.0	479.1	-24.8	-32.9	66.2	644.1	627.1	242.1	1.000146
20500.0	469.6	-26.0	-32.7	66.2	634.5	625.5	244.2	1.000144
21000.0	460.2	-27.2	-32.4	66.2	625.3	623.8	243.7	1.000142
21500.0	451.0	-28.4	-32.3	66.2	616.0	622.1	243.1	1.000139
22000.0	441.8	-29.6	-32.3	66.2	606.4	620.6	242.1	1.000137
22500.0	432.9	-30.8	-32.4	66.2	597.0	619.1	242.4	1.000134
23000.0	424.1	-32.0	-41.6	66.2	587.7	617.7	242.6	1.000132

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79 1100 HRS MST
ASCENSION NO. 69

UPPER AIR DATA
1090060069
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	415.4	-23.1	-41.0	17.5	578.6	616.1	242.0	41.3	1.000130
24000.0	406.8	-24.4	-40.1	21.6	569.7	614.4	240.8	42.4	1.000128
24500.0	398.4	-25.7	-39.2	26.7	560.9	612.6	239.5	43.4	1.000126
25000.0	390.1	-26.9	-37.6	35.5	551.9	611.4	238.6	41.9	1.000124
25500.0	382.0	-28.2	-36.5	44.3	543.0	609.9	237.5	40.4	1.000123
26000.0	373.9	-29.5	-37.3	45.4	534.5	608.1	235.5	39.6	1.000121
26500.0	366.0	-30.9	-38.5	46.8	526.2	606.4	233.5	39.0	1.000119
27000.0	358.2	-32.3	-39.7	47.3	518.1	604.6	231.9	39.0	1.000117
27500.0	350.6	-33.7	-40.9	47.8	510.0	602.9	231.3	39.1	1.000115
28000.0	343.1	-35.0	-41.5	51.0	501.6	601.2	232.0	39.5	1.000113
28500.0	335.7	-36.2	-41.7	56.7	493.5	599.7	233.0	39.2	1.000111
29000.0	328.4	-37.4	-43.8	50.8	485.3	598.2	234.1	38.5	1.000109
29500.0	321.2	-38.6	-46.7	41.7	477.1	596.8	235.4	37.8	1.000107
30000.0	314.2	-39.3	-48.6	36.1	468.0	595.8	236.9	37.2	1.000105
30500.0	307.3	-40.1	-52.3	25.5**	459.4	594.7	237.3	37.8	1.000103
31000.0	300.5	-41.4	-72.8	1.9**	451.7	593.1	237.2	39.0	1.000101
31500.0	293.8	-42.6			444.0	591.5	237.6	39.2	1.000099
32000.0	287.2	-43.9			436.4	589.9	238.1	39.1	1.000097
32500.0	280.7	-45.1			428.9	588.3	239.7	39.6	1.000096
33000.0	274.4	-46.4			421.6	586.7	241.5	40.4	1.000094
33500.0	268.2	-47.6			414.4	585.0	240.8	41.8	1.000092
34000.0	262.2	-48.8			407.2	583.5	239.6	43.3	1.000091
34500.0	256.2	-49.5			399.1	582.8	237.6	44.4	1.000089
35000.0	250.3	-50.2			391.1	581.7	235.5	45.5	1.000087
35500.0	244.5	-51.2			383.8	580.4	235.3	46.6	1.000085
36000.0	238.8	-52.2			376.7	579.0	235.5	47.6	1.000084
36500.0	233.3	-53.3			369.7	577.6	235.5	47.1	1.000082
37000.0	227.9	-54.3			362.8	576.3	235.4	46.3	1.000081
37500.0	222.5	-55.2			355.7	575.1	235.0	45.3	1.000079
38000.0	217.3	-55.9			348.4	574.2	234.5	44.3	1.000078
38500.0	212.1	-56.6			341.3	573.3	234.5	44.4	1.000076
39000.0	207.1	-57.3			334.3	572.4	234.9	45.3	1.000074
39500.0	202.2	-58.0			327.4	571.5	235.6	46.3	1.000073
40000.0	197.4	-58.7			320.7	570.5	236.6	47.2	1.000071
40500.0	192.7	-59.4			314.0	569.6	238.1	48.0	1.000070
41000.0	188.1	-60.1			307.5	568.8	239.8	48.6	1.000069
41500.0	183.6	-59.7			299.7	568.2	241.0	49.1	1.000067
42000.0	179.2	-59.1			291.7	569.9	242.5	49.3	1.000065
42500.0	175.0	-58.5			284.0	570.7	243.9	49.5	1.000063
43000.0	170.8	-58.0			276.5	571.5	244.8	49.1	1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79 1100 HRS MST
ASCENSION NO. 69

UPPER AIR DATA
1090000009
S M R

GEOMETRIC ALTITUDE 3248034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	166.8	-57.4			269.2	572.3	245.7	48.7	1.000060
44000.0	162.8	-56.8			262.1	573.0	245.3	48.9	1.000058
44500.0	158.9	-56.2			255.2	573.8	244.7	49.1	1.000057
45000.0	155.1	-55.8			248.7	574.3	243.8	49.3	1.000055
45500.0	151.5	-55.8			243.9	573.0	242.9	49.4	1.000054
46000.0	147.9	-57.2			238.5	572.5	242.2	49.1	1.000053
46500.0	144.4	-57.1			232.6	572.6	242.1	47.8	1.000052
47000.0	141.0	-57.0			227.3	572.7	242.0	46.5	1.000051
47500.0	137.6	-57.1			221.9	572.6	242.0	45.2	1.000049
48000.0	134.4	-57.8			217.4	571.7	242.1	43.8	1.000048
48500.0	131.2	-58.5			212.9	570.8	242.1	43.0	1.000047
49000.0	128.0	-59.2			208.5	569.8	242.0	42.6	1.000046
49500.0	125.0	-59.3			204.1	568.9	242.3	42.5	1.000045
50000.0	122.0	-59.8			199.1	569.1	243.0	43.1	1.000044
50500.0	119.1	-59.2			193.9	569.8	243.7	43.8	1.000043
51000.0	116.2	-59.4			189.4	569.0	244.7	44.9	1.000042
51500.0	113.4	-59.5			185.0	569.5	245.7	46.1	1.000041
52000.0	110.7	-60.3			181.2	568.4	246.8	46.3	1.000040
52500.0	108.1	-61.2			177.6	567.2	247.8	46.0	1.000040
53000.0	105.4	-61.7			173.7	566.5	249.0	45.0	1.000039
53500.0	102.9	-61.8			169.6	566.4	250.4	42.1	1.000038
54000.0	100.4	-61.9			165.6	566.2	252.1	39.2	1.000037
54500.0	98.0	-62.5			162.0	565.4	252.6	35.1	1.000036
55000.0	95.6	-63.5			158.7	564.4	253.3	31.0	1.000035
55500.0	93.3	-63.9			155.3	563.6	251.8	27.7	1.000034
56000.0	91.0	-63.6			151.3	563.9	249.2	24.7	1.000034
56500.0	88.8	-63.4			147.5	564.2	245.9	22.8	1.000033
57000.0	86.6	-63.2			143.7	564.5	242.1	21.7	1.000032
57500.0	84.5	-63.0			140.1	564.7	238.5	20.8	1.000031
58000.0	82.4	-63.9			137.2	563.5	236.4	20.2	1.000031
58500.0	80.4	-64.8			134.4	562.4	234.2	19.6	1.000030
59000.0	78.4	-65.6			131.6	561.2	236.7	18.0	1.000029
59500.0	76.5	-66.5			129.0	560.1	240.4	16.4	1.000029
60000.0	74.6	-67.2			126.3	559.0	249.3	15.4	1.000028
60500.0	72.8	-65.9			122.4	560.8	262.2	15.7	1.000027
61000.0	71.0	-64.6			118.6	562.5	273.4	16.6	1.000026
61500.0	69.3	-64.0			115.4	563.4	277.2	15.0	1.000026
62000.0	67.6	-64.3			112.7	563.0	281.8	13.6	1.000025
62500.0	65.9	-64.6			110.1	562.0	289.3	11.2	1.000025
63000.0	64.3	-64.0			107.1	563.4	292.0	7.6	1.000024

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79
ASCENSION NO. 69

UPPER AIR DATA
1090060069
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.7	-62.0		103.5	568.1	307.5	4.2	1.000023
64000.0	61.2	-62.2		101.1	565.9	311.8	3.8	1.000023
64500.0	59.7	-62.4		98.7	565.0	312.0	3.8	1.000022
65000.0	58.3	-62.6		96.4	565.3	305.9	3.6	1.000021
65500.0	56.9	-50.4		93.2	568.2	275.1	3.2	1.000021
66000.0	55.5	-57.7		89.8	571.9	246.8	3.9	1.000020
66500.0	54.2	-57.2		87.5	572.5	241.8	5.5	1.000019
67000.0	52.9	-57.2		85.4	572.5	241.9	7.2	1.000019
67500.0	51.7	-57.2		83.4	572.5	243.1	8.2	1.000019
68000.0	50.5	-57.2		81.4	572.5	249.4	6.7	1.000018
68500.0	49.3	-57.1		79.4	572.7	258.9	5.4	1.000018
69000.0	48.1	-56.8		77.5	573.0	279.8	2.9	1.000017
69500.0	47.0	-56.8		75.0	573.3	5.0	2.1	1.000017
70000.0	45.9	-56.4		73.8	573.5	37.6	4.3	1.000016
70500.0	44.8	-56.2		72.0	573.8	35.0	3.9	1.000016
71000.0	43.8	-56.0		70.2	574.1	31.8	3.6	1.000016
71500.0	42.7	-55.7		68.5	574.4	20.4	2.7	1.000015
72000.0	41.7	-55.5		66.8	574.7	340.4	1.8	1.000015
72500.0	40.8	-55.3		65.2	575.0	292.3	2.3	1.000015
73000.0	39.8	-55.1		63.6	575.3	295.9	2.8	1.000014
73500.0	38.9	-54.9		62.0	575.0	306.7	3.3	1.000014
74000.0	38.0	-54.7		60.5	575.9	313.5	3.7	1.000013
74500.0	37.1	-54.4		59.1	576.2	298.1	3.5	1.000013
75000.0	36.2	-54.2		57.6	576.4	281.6	3.5	1.000013
75500.0	35.4	-54.0		56.2	576.7	270.9	4.2	1.000013
76000.0	34.5	-53.8		54.8	577.0	270.0	5.8	1.000012
76500.0	33.7	-53.6		53.5	577.3	269.4	7.3	1.000012
77000.0	32.9	-53.3		52.2	577.6	275.5	8.7	1.000012
77500.0	32.2	-52.8		50.9	578.3	282.9	10.1	1.000011
78000.0	31.4	-52.2		49.5	579.1	283.5	11.7	1.000011
78500.0	30.7	-51.5		48.3	580.0			1.000011
79000.0	30.0	-50.9		47.0	580.9			1.000010
79500.0	29.3	-49.7		45.7	582.3			1.000010
80000.0	28.6	-48.5		44.4	583.9			1.000010
80500.0	28.0	-47.3		43.2	585.4			1.000010

STATION ALTITUDE 3997.30 FEET MSL
 19 APR. 79 1100 HRS MST
 ASCENSION NO. 69

MRN SIGNIFICANT LEVEL DATA
 1090060069
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2452.	9999.**	9999.**	-9999.**	-9999.**	99	-46.6	2.760+1	
2398.	9999.**	9999.**	-9999.**	-9999.**	99	-50.9	3.000+1	
2340.	277.	5.	-1.	5.	99	-53.3	3.280+1	
2071.	253.	3.	1.	3.	99	-57.2	5.000+1	
2907.	243.	2.	1.	2.	99	-57.2	5.530+1	
1977.	300.	2.	-1.	2.	99	-62.6	5.800+1	
1921.	298.	3.	-1.	3.	99	-61.9	6.350+1	
1911.	291.	4.	-1.	4.	99	-64.8	6.460+1	
1862.	276.	8.	-1.	8.	99	-63.9	7.000+1	
1622.	249.	8.	3.	7.	99	-67.3	7.470+1	
1745.	239.	11.	6.	9.	99	-63.0	8.460+1	
1684.	252.	14.	4.	14.	99	-63.9	9.360+1	
1643.	252.	20.	6.	19.	99	-61.9	1.000+2	

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79
ASCENSION NO. 69

MANDATORY LEVELS
1090050069
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4913.	18.9	-1.5	27.	255.6	20.1
800.0	6004.	13.5	-1.1	39.	260.4	24.8
750.0	8360.	7.8	-1.4	52.	266.2	21.7
700.0	10210.	1.9	-4.0	65.	267.4	14.7
650.0	12160.	.9	-21.6	10.	248.3	22.0
600.0	14263.	-2.9	-26.6	14.	207.0	14.1
550.0	16502.	-8.3	-30.5	15.	219.9	19.5
500.0	18900.	-12.7	-33.9	15.	236.3	35.4
450.0	21521.	-18.3	-33.1	20.	243.0	35.4
400.0	24360.	-25.5	-39.7	20.	239.7	43.2
350.0	27492.	-33.8	-41.0	48.	231.4	39.1
300.0	30978.	-41.5			237.2	39.0
250.0	34952.	-50.2			235.5	45.5
200.0	39037.	-58.3			230.1	46.6
175.0	42391.	-58.5			243.8	49.5
150.0	45983.	-57.2			242.6	49.4
125.0	49350.	-59.9			242.2	42.5
100.0	53917.	-61.9			252.1	36.8
80.0	58414.	-64.9			234.1	19.5
70.0	61074.	-63.9			275.3	15.8
60.0	64181.	-62.3			312.0	3.8
50.0	67935.	-57.2			251.9	6.3
40.0	72580.	-55.1			291.8	2.7
30.0	78559.	-50.9				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
19 APR. 79
ASCENSION NO. 69

MRN MANDATORY LEVELS
1090060069
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECEMETERS	DIRECTION DEG (TN)	WIND DATA SPEED MPS	N-S MPS	E-W MPS	DEW PT DFP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2396.	9999.**	9999.**	-9999.**	-9999.**	99	-50.9	3.000+1
2212.	292.	1.	-1.	1.	99	-55.1	4.000+1
2071.	252.	3.	1.	3.	99	-57.2	5.000+1
1956.	312.	2.	-1.	1.	99	-62.3	6.000+1
1862.	275.	8.	-1.	8.	99	-63.9	7.000+1
1780.	234.	10.	6.	8.	99	-64.9	8.000+1
1643.	252.	20.	6.	19.	99	-61.9	1.000+2
1504.	242.	22.	10.	19.	99	-59.9	1.250+2
1369.	243.	25.	12.	23.	99	-57.2	1.500+2
1292.	244.	25.	11.	23.	99	-58.5	1.750+2
1208.	236.	24.	13.	20.	99	-58.3	2.000+2
1065.	235.	23.	13.	19.	99	-50.2	2.500+2
944.	237.	20.	11.	17.	99	-41.5	3.000+2
838.	231.	20.	13.	10.	07	-33.8	3.500+2
743.	240.	22.	11.	19.	14	-25.5	4.000+2
656.	243.	16.	8.	10.	15	-18.3	4.500+2
576.	236.	10.	10.	15.	21	-12.7	5.000+2
503.	220.	10.	6.	6.	22	-8.3	5.500+2
435.	207.	7.	6.	3.	24	-2.9	6.000+2
371.	248.	11.	4.	11.	23	.9	6.500+2
311.	267.	8.	0.	6.	06	1.9	7.000+2
255.	266.	11.	1.	11.	09	7.8	7.500+2
201.	266.	13.	1.	13.	14	13.5	8.000+2
150.	256.	10.	3.	10.	19	18.9	8.500+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.